

Claims DE 198 22 255 C2

1. Incident light illuminating device for a stereo microscope,
  - with two observation channels located in one reference plane,
  - which between them specify a plane of symmetry aligned vertical to the reference plane and the line intersecting these two planes,
  - with at least one light waveguide with an associated focusing lens which transfers the illuminating light into the frontal region of the lens of the stereo microscope, which aligns the illuminating light bundle in the plane of symmetry and directs it at an angle to the lens plane which prevents a direct reflection of the illuminating light at the lens into the two observation channels and thus lights up the lens plane,  
characterized in that
    - the magnification of the stereo microscope is adjustable by means of a zoom system,
    - and a device is provided which connects the focusing lens with the zoom system, which adjusts the lighted surface in the object plane as a function of the magnification to the observable surface area of the object plane at this magnification.
2. Incident light illuminating device according to Claim 1, characterized in that the illuminating light is used to cause the object to fluoresce and can be transferred along the light waveguide.
3. Incident light illuminating device according to Claim 1 or 2, characterized in that the stereo microscope is a Greenough type.
4. Incident light illuminating device according to one of the Claims 1 to 3, characterized in that the focusing lens can pivot and/or be displaced.
5. Incident light illuminating device according to one of Claims 1 to 4, characterized in that the light waveguide is designed as a flexible glass waveguide or plastic light waveguide or liquid light waveguide.
6. Incident light illuminating device according to one of Claims 1 to 5, characterized in that two lighting channels are provided for which a direct reflection of the illuminating light on the object into the two observation channels is prevented.
7. Incident light illuminating device according to Claim 6, characterized in that the two illuminating channels are located within the stereo microscope and are designed as twin light waveguides and ensure an overlapping of the two illuminated spots in the object plane.

5 pages of figures